



## Data Sheet

# Probumin™ Bovine Serum Albumin (BSA)

## The Industry Standard for Performance



Albumin is one of the most extensively utilized proteins in the medical industry. Its availability, inherent stability, and ligand binding ability make albumin an essential component in the production of many therapeutic drugs and diagnostic tests.

Millipore, with over five decades of protein fractionation expertise, is the world's largest and most experienced manufacturer of high quality albumins for the diagnostic and cell culture markets. Our collaborations with the

earliest pioneers of protein fractionation gives us the unique perspective of understanding the significance of various process strategies and of utilizing this knowledge to develop albumin products customized for different applications. Today we continue to advance the science of bulk albumin purification. Our proprietary heat shock/cold solvent fractionation technology and state-of-the-art facility enable us to deliver products with the highest quality, performance, and safety.

## HIGHEST QUALITY AND RELIABILITY

The high quality of our bovine albumin is demonstrated in our track record of success. Today companies throughout the world depend on Millipore BSA products for the manufacture of numerous FDA-approved biologics, medical devices, animal vaccines, and diagnostic assays. Millipore's production facility in Kankakee, IL operates under an ISO9001:2000 quality system and follows applicable cGMP guidelines. We have been issued (EC) No. 1774/2002 facility numbers in compliance with European regulations. Each lot of BSA is accompanied by a Certificate of Analysis detailing complete product testing and specifications. To facilitate importation of our products to Europe, Millipore can provide an EDQM Certificate of Suitability upon request. Certificates of Origin are also available.

## RAW MATERIAL SOURCING

Products of bovine origin carry an inherent risk of contamination with certain adventitious agents and bovine spongiform encephalopathy (BSE). To ensure the most comprehensive mitigation of these risks Millipore follows strict guidelines for the procurement of raw materials. The raw material used to manufacture Probumin BSA products in our Kankakee facility is exclusively derived from U.S. sourced cattle that are under 30 months of age. All ruminant materials used for manufacture originate from non-BSE related herds. Animals receive both ante- and post-mortem veterinary health inspection and the abattoir is a USDA-licensed facility. The record of each raw material is incorporated into the manufacturing records and veterinary certificates are maintained on file at the manufacturing facility.

Millipore also offers Probumin Plus BSA manufactured from Australian origin raw material. Australia is classified as a GBR I country and is free from BSE as well as foot-and-mouth disease, vesicular stomatitis, rinderpest, peste des petits ruminants, and Rift Valley fever.

## HEAT SHOCK/SOLVENT FRACTIONATION PROCESS

Bovine serum albumin was developed as an inexpensive alternative to human serum albumin beginning in World War II. Over the last 60 years, as the diversity of applications using albumin have multiplied scientists have devised a variety of methods to isolate and purify commercial quantities of BSA. Millipore employs a proprietary heat shock/ solvent fractionation process. Our purification technology improves the yield, purity, and effectiveness of bovine serum albumin.

## Why is Millipore's Probumin the No. 1 BSA Brand?

- Highest Quality and Reliability
  - Assurance of consistency in performance and supply
- 50 years of experience
  - Track record of success in pharmaceutical, diagnostic and veterinary applications
- Heat Shock/Solvent Fractionation Process
  - Proprietary process for improved purity and effectiveness in your application
- Raw Material Sourcing
  - Exclusively from U.S. cattle under 30 months
  - Australian sourced also available
- Proprietary Virus Reduction process step
  - To further assure safety and purity of Probumin
- Broadest product portfolio
  - The right albumin product for your application
  - Your source for cell culture supplements and services

## International Distribution and Sales

Our bovine albumin is used in research and manufacturing worldwide. With our dedicated customer service team, it is our goal to continuously improve and perfect on-time and accurate product delivery through our global product distribution network and our experienced international sales team.

## PROBUMIN APPLICATION TABLE

		Cell Culture	Microbial Culture	Molecular Biology	EIA Systems	RIA Systems	Serology	Antibody Enhancement	Blood Bank Reagents	Binding, transport studies	Perfusion studies	Protein base, filter/diluent	Protein standard	Molecular Weight standard	Adjuvant for veterinary use
<b>BSA Powders</b>															
82-100	Probumin Life Science Grade	X	X	X	X	X	X			X	X		X	X	X
82-047	Probumin Biotech Grade	X	X	X	X	X				X					X
83-300	Probumin Plus Low IgG Australian sourced	X	X							X	X	X			
81-068	Probumin Media Grade	X	X	X						X	X				
83-100	Probumin Plus Australian sourced		X							X	X	X			
82-002	Probumin Fatty Acid Free		X		X	X	X	X		X	X				
81-003	Probumin Universal Grade		X		X	X	X	X	X	X		X			
82-045	Probumin Diagnostic Grade			X	X	X	X	X		X					
81-066	Probumin Reagent Grade				X	X	X			X	X		X		X
81-001	Probumin Crystallized			X	X	X	X								X
81-065	Probumin Microbiological Grade		X									X			
84-065	Probumin Vaccine Grade		X												X
<b>BSA Solutions</b>															
81-007	Probumin Micro Solution	X	X		X	X	X	X	X			X		X	
81-070	Probumin Manufacturing Solution		X		X	X	X	X	X			X		X	
81-077	Probumin PE Solution		X		X		X	X	X			X			
84-066	Vaccine Grade Solution 5%		X												
82-046	Probumin Diagnostic Solution			X	X	X		X		X				X	
81-078	Probumin PE Immunohematology Solution				X	X	X	X	X			X			
81-177	Probumin PE Euro Solution				X	X	X	X	X			X			
81-079	Probumin PE Low NaCl Solution				X	X	X	X	X			X			
81-096	MOD-U-CYTE® Media and Antisera Diluent				X	X	X	X	X						



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